

Appl. No. : 10/009,851
Filed : November 6, 2001

REMARKS

In the Final Office Action mailed on April 6, 2004, the Examiner rejected all pending claims, Claims 34-41 and 48. In the present Amendment and Response to Office Action, Applicants have amended Claims 34, 41 and 48. Applicants have also amended the drawings. Applicants respectfully request entry of the amendments and full consideration of the remarks contained herein.

Amendments to the Claims

Applicants have amended the claims to clarify further the subject matter that Applicants regard as the invention. For example, Applicants have amended Claim 34 to recite that "the thermal treatment chamber is configured ... to hold the wafer contact-free in a floating state during the treatment." Support for this amendment can be found in the Application as originally filed. *See, e.g.*, pp. 2-4 and 6 and Claims 7 and 17 of the Application as originally filed. Applicants have also amended Claim 41 to recite that "the heating means are provided within the ring." Support for this amendment can also be found in the Application as originally filed, *e.g.*, on pages 6-7 and Figures 5a and 5b. In addition, Claim 48 has been amended to recite that "the ring is configured to surround the wafer within the thermal treatment chamber and within the loading chamber" and to delete references to the "handling robot." Support for this amendment can be found in the Application as originally filed, *e.g.*, on pages 3-7. Accordingly, Applicants respectfully submit that the amendments add no new matter and are fully supported by the Application as originally filed.

Amendments to the Drawings and Objections to the Drawing Correction of 2/17/04

The Examiner has objected to the drawing correction of 2/17/04 as containing particulars of a handling robot, which the Examiner stated was new matter. Applicants traverse the rejections, since the schematic representation offered previously presents no new over the robot descriptions in the specification, which are discussed with respect to the § 112, first paragraph rejections below.

Nevertheless, Applicants have furnished a new corrected Figure 12, which does not show a handling robot. Moreover, Applicants submit that such a robot need not be shown in the

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figures, as the amended claims do not recite a robot. Consequently, Applicants respectfully submit that the objection to the drawing correction is overcome.

The Examiner has also objected to the drawings under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the claims. In particular, the Examiner has stated that the "loading chamber" must be shown or be cancelled from the claims. In response, Applicants have provided a new Figure 12, which is attached herewith and shows a "loading chamber" 120. Support for the "loading chamber" can be found in the Application as originally filed, *e.g.*, in originally filed Claims 1, 8 and 10. Moreover, as the "loading chamber" is simply represented schematically, Applicants submit that no new details or matter are added. Consequently, Applicants submit that new Figure 12 is fully supported by the application as originally filed. As a result, in view of new Figure 12, Applicants respectfully submit that the objections to the drawings are overcome.

Rejections Under 35 U.S.C. § 112, First Paragraph

The Examiner has rejected Claim 48 under 35 U.S.C. § 112, first paragraph, as "containing subject matter which was not described in such a way as to enable one skilled in the art to which it pertains ... to make and/or use the invention. The preferred embodiment of the handling robot has not been delineated."

Initially, Applicants note that Claim 48 has been amended to expedite prosecution of the present Application and that references to the "handling robot" have been removed from that claim. Accordingly, Applicants respectfully submit that the rejection of independent Claim 48 under 35 U.S.C. § 112, first paragraph, is overcome.

Nevertheless, Applicants note and submit, for the record, that Claim 48 does satisfy U.S.C. § 112, first paragraph. Applicants note that, the specification as a whole, provides a functional description of the type of robot suitable for making and/or using the invention. For example, as noted in originally filed Claim 1 and pages 4 and 6 of the Application as originally filed, the handling robot can be any robot which is able to interface with the ring and treatment apparatus and which can transport the ring/wafer combination back and forth between the loading chamber and the treatment chamber. Thus, Applicants submit that the preferred embodiment of the invention has been delineated, because *any* handling robot capable of this functionality can be used to make and/or use the invention. Applicants also submit that such handling robots are known to the skilled

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artisan and that the functional description in the Application would be understood by the skilled artisan to reference those handling robots. As a result, Applicants submit that further description is unnecessary and that Claim 48, without the present amendments, complied with U.S.C. § 112, first paragraph. *See, e.g., In re Buchner*, 929 F.2d 660, 18 U.S.P.Q.2d 1331 (Fed. Cir. 1991) (the specification need not disclose, and preferably omits, what is well-known to those skilled in the art).

Rejections Under 35 U.S.C. § 102 and 103(a)

The Examiner has rejected Claim 34-40 as being anticipated by or, in the alternative, as being obvious over Murdoch (EP 0 405 301 A2). In particular, the Examiner stated that Murdoch discloses “moving a wafer & it’s ring from one processing station to another, abstract.” The Examiner stated that Murdoch appears to be silent on whether the processing in that patent included heating. The Examiner stated, however, that even if “not disclosed, it would, in the alternative, be obvious.”

The Examiner also stated that Claims 34-41 were obvious over Murdoch in view of Minura (U.S. Patent No. 4,468,259). Regarding Claim 41, the Examiner stated that Minura disclosed a ring heating means and that it would have been obvious to include such a heating means with the ring of Murdoch to increase efficiency as taught by Minura.

Applicants respectfully submit that the claims, as amended herewith, distinguish the art of record.

Regarding the rejection of independent Claim 34, Applicants note that Claim 34 has been amended recite that “the thermal treatment chamber is configured ... to hold the wafer contact-free in a floating state during the treatment.” In contrast, Applicants note that Murdoch teaches a ring having clips that contact and support a wafer throughout processing. *See, e.g., Murdoch*, Col. 8, line 55 to Col. 10, line 14 and Figure 18 (noting that grasping the wafer with the engagement mechanism of the ring results in “little if any interference with the processing of the wafer”). Thus, Applicants submit that Murdoch does not teach that “the thermal treatment chamber is configured ... to hold the wafer contact-free in a floating state during the treatment” as recited in independent Claim 34. Consequently, Applicants submit that the art of record does not teach or suggest all limitations of Claim 34 and, as such, that Claim 34 is not anticipated or obvious in view of that art.

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Regarding the rejection of dependent Claim 41, Applicants note Claim 41 has been amended to recite that "the heating means are provided within the ring." Applicants submit that the art of record does not teach or suggest such a heating means. For example, Minura discloses that its heating means is actually the surface of the ring itself, which is designed to absorb radiant energy to heat the ring. *See, e.g.*, Minura, Col. 2, line 67 to Col. 3, line 22 (noting that the ring itself "functions as a subsidiary heating means" that is "heated upon its exposure to light radiated from the plane light sources"). As such, Applicants submit that the combination of Murdoch and Minura does not teach or suggest "heating means ... provided within the ring," as recited by dependent Claim 41. Applicants also submit that the other art of record does not satisfy this deficiency. Consequently, Applicants respectfully submit that dependent Claim 41 is not obvious in view of the art of record.

Accordingly, Applicants submit that the pending claims are allowable over the art of record. Applicants have not addressed the rejections of all dependent claims as being moot in view of the amendments and remarks herein. However, Applicants expressly do not acquiesce in the Examiner's findings not addressed herein. Indeed, Applicants submit that the dependent claims not addressed herein recite further nonobvious features of particular utility.

CONCLUSIONS

In view of the foregoing amendments and remarks, Applicants request entry of the amendments and submit that the application is in condition for allowance and respectfully request the same. If some issue remains which the Examiner feels may be addressed by Examiner's amendment, the Examiner is cordially invited to call the undersigned for authorization.

Respectfully submitted,

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